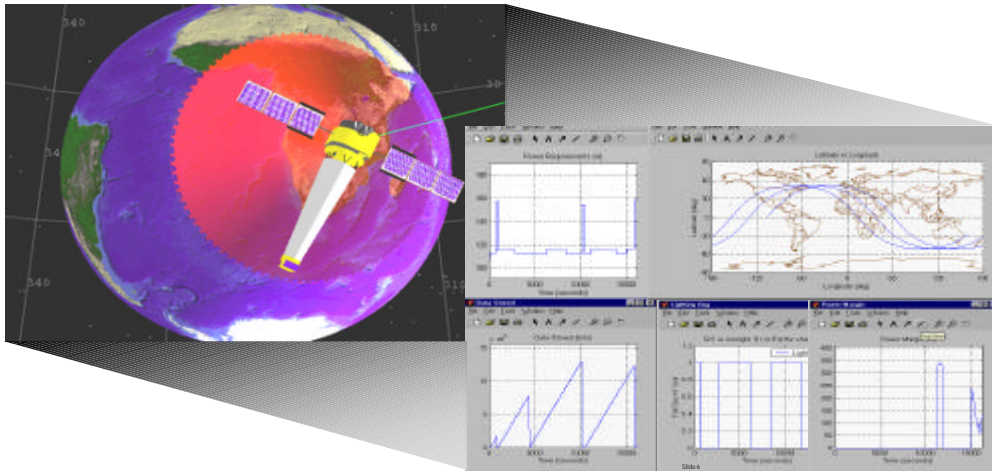# Integration of Satellite Tool Kit (STK) and Matlab-Based SPASIM

Objective

The purpose of this task would be to integrate STK with SPASIM in order for STK to perform the communicators' analysis part of the overall avionics system simulation. Also, STK could be used to do the orbit propagation for SPASIM. Tasks involved include building an interface between STK and Matlab (which the 2 companies are working on to some degree), defining the parameters that SPASIM needs from STK, and defining the parameters STK needs from SPASIM. The interface between STK and SPASIM could have 2 levels: 1) a static interface where data files are transferred between the 2 programs, and 2) a real-time interface where the programs would exchange data as the simulation progressed. Assumptions right now would be from SPASIM to be the controlling program in order to step the mission simulation.

Why Needed

The integration of modeling and analysis tools to perform realistic system simulations is needed to better understand the entire system and how its components interact early in a project in order to produce better defined system requirements and designs.

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